



Motor Basics Webinar Description

Electric motors are the backbone of water and wastewater treatment systems, powering pumps, blowers, and critical process equipment. Yet many operational problems stem from a limited understanding of how motors actually work. This course builds a strong foundation in motor operation and performance, giving participants the knowledge needed to operate, evaluate, and troubleshoot motors with confidence.

Participants will learn the fundamentals of AC and DC motor operation, including three-phase power, magnetic fields, and how windings and rotors produce motion. The course explains key performance concepts such as speed, torque, horsepower, and efficiency, along with how to interpret motor nameplate data and apply it in real operating conditions.

In addition to theory, the course connects these fundamentals to practical field applications. Participants will explore common motor issues such as starting problems, overheating, bearing failures, and alignment issues, along with the role of switches, relays, and motor protection systems in maintaining reliable operation.

Emphasis is placed on recognizing early warning signs of failure, understanding root causes, and improving overall motor efficiency. Basic testing and evaluation techniques are introduced, enabling participants to make informed decisions about maintenance, repair, and replacement.

By the end of the course, attendees will have a clear understanding of how motors function within treatment systems and the tools needed to keep them operating safely, efficiently, and reliably.